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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,315	07/18/2003	Yoshimoto Matsuda	ACO 351	4340
50488	7590	11/14/2006		
ALLEMAN HALL MCCOY RUSSELL & TUTTLE LLP 806 SW BROADWAY SUITE 600 PORTLAND, OR 97205-3335			EXAMINER NGUYEN, TU MINH	
			ART UNIT 3748	PAPER NUMBER

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,315

Applicant(s)

MATSUDA, YOSHIMOTO

Examiner

Tu M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-11,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1 and 3 is/are allowed.
- 6) ☒ Claim(s) 4 and 7-10 is/are rejected.
- 7) ☒ Claim(s) 11,13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. An Applicant's Request for Continued Examination (RCE) filed on October 10, 2006 has been entered. Per instruction from the RCE, an Applicant's Amendment filed on August 14, 2006 has been entered. Claims 2 and 6 have been canceled; and claims 1, 3, 4, and 7 have been amended. Overall, claims 1, 3, 4, 7-11, 13, and 14 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (U.S. Patent 5,787,709).

Re claim 8, as shown in Figures 1-2, Watanabe et al. disclose an exhaust pipe collecting structure for a multi-cylinder engine unit having multiple cylinders, in which exhaust pipes (1, 2, 3, and 4) extend from at least four cylinders of the multiple cylinders and are collected into one exhaust passage at a location downstream in a flow of exhaust gases, the structure comprising:

- an exhaust manifold having an upstream end portion which is connected to the cylinders and including a plurality of exhaust passages (1, 2, 3, and 4) corresponding to exhaust ports of the cylinders, respectively;

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- a connecting tube (6) connected to a downstream end of the exhaust manifold, the connecting tube including a plurality of connecting exhaust passages communicating with the plurality of exhaust passages of the exhaust manifold and being merged into the one exhaust passage at a location inside the connecting tube;

wherein at least a downstream end portion of the exhaust manifold includes the exhaust passages which are arranged in two lines (7d, 7b) and forms an integral tube (7); and

wherein a casting parting plane (7a, 7c) of the exhaust manifold is provided between the two lines of the exhaust passages.

Re claim 9, in the structure of Watanabe et al., the multiple cylinders are four cylinders.

Re claim 10, in the structure of Watanabe et al., the exhaust manifold is integrally cast by locating the casting parting plane (7a, 7c) of the exhaust manifold within one continuous plane, as clearly shown in Figure 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maeda (U.S. Patent 6,199,376) in view of Mashiko et al. (U.S. Patent 6,454,622).

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Re claim 4, as shown in Figure 1-4, Maeda discloses an exhaust pipe collecting structure for a multi-cylinder engine unit having multiple cylinders, in which exhaust pipes extend from at least four cylinders of the multiple cylinders, the structure comprising:

- a first exhaust pipe group and a second exhaust pipe group each of which is comprised of two exhaust pipes selected from four exhaust pipes respectively connected to the four cylinders at upstream end portions thereof (as clearly shown in Figure 1);

- a first exhaust sub-collecting pipe (62) configured to collect two exhaust pipes (18, 28) of the first exhaust pipe group to integrally form one exhaust passage;

- a second exhaust sub-collecting pipe (not numbered but clearly shown in Figure 1) configured to collect two exhaust pipes of the second exhaust pipe group to form another exhaust passage;

- a first joint portion (not numbered but clearly shown in Figure 3) formed at a downstream end portion of the first exhaust sub-collecting pipe; and

- a second joint portion (see Figures 1 and 3) formed at a downstream end portion of the second exhaust sub-collecting pipe, the second joint portion being arranged in parallel with the first joint portion;

wherein the first exhaust sub-collecting pipe includes the first exhaust pipe group and the first joint portion, and is formed in one unitary integrally cast piece, and the second exhaust sub-collecting pipe includes the second exhaust pipe group and the second joint portion, and is formed in one unitary, integrally cast piece, the unitary integrally cast pieces being separable from each other.

Maeda, however, fails to disclose that the exhaust pipes are collected into one exhaust passage at a location downstream of the exhaust pipes; and that the structure further comprises a connecting tube for allowing the exhaust gases flowing through the exhaust passages inside the first and the second joint portion to be led into a common exhaust passage.

As shown in Figure 19, Mashiko et al. disclose an exhaust system for a 4-cycle engine of small watercraft. As depicted in Figure 41, Mashiko et al. teach that it is conventional in the art to utilize a connecting tube (240c) to allow exhaust gas from the first and second exhaust sub-collecting pipes (238c1-238c4) to be led into a common exhaust passage; wherein the connecting tube is separable from an integral cast piece of the first exhaust sub-collecting pipe and an integral cast piece of the second exhaust sub-collecting pipe; and wherein the connecting tube includes two parts having a joint surface at which the two parts are jointed to each other, the joint surface extending along a longitudinal direction of the connecting tube. It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the connecting tube taught by Mashiko et al. in the structure of Maeda, since the use thereof would have been routinely practiced by those with ordinary skill in the art.

Re claim 7, in the modified structure of Maeda, as shown in Figure 41 of Mashiko et al., the connecting tube (240c) and the first and second exhaust sub-collecting pipes (238c1-238c4) have double-walled structures to have cooling passages (240d) between walls.

Allowable Subject Matter

6. Claims 1 and 3 are allowed.

Claims 11, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to the references applied in the previous Office Action have been considered but are moot in view of the new ground(s) of rejection.

Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of two patents: Kobayashi et al. (U.S. Patent 6,837,044) and Havemann et al. (U.S. Patent 6,959,543) further disclose a state of the art.

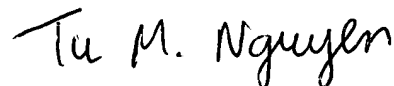
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Communication

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TMN

Tu M. Nguyen

November 13, 2006

Primary Examiner

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